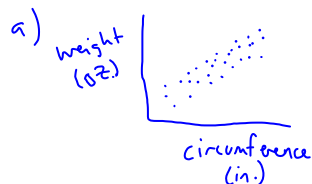


Suppose you were to collect data for each pair of variables. You want to make a scatterplot. Which variable would you use as the explanatory variable and which as the response variable? Why? Make a scatterplot, and discuss the likely direction, form, and strength.

a) Apples: circumference (inches), weight (ounces)

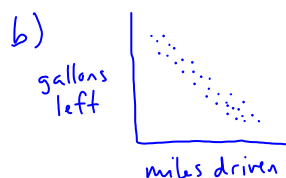
b) Gasoline: number of miles you drove since filling up, gallons remaining in the tank



Direction: Positive

Form: Linear

Strength: Strong



Direction: Negative

Form: Linear

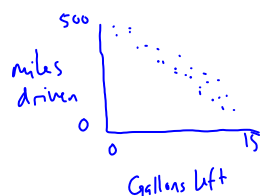
Strength: Strong

Things that could affect the above answers:

- How fast you drive
- What car you drive
- Distance

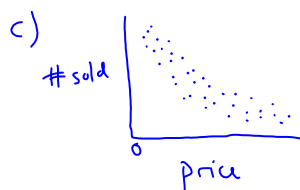


- What does the graph look like if you "flip" the axes?



- Shape of graph won't change depending on axes
- Axes choice matters in terms of what we want the explanatory and response variables to be

- c) T-shirts at a store: price of each, number sold
- d) Scuba diving: depth, water pressure
- e) Scuba diving: depth, visibility
- f) All elementary school students: weight, score on a reading test



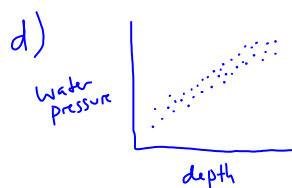
Direction: Negative

Form: Curved

Strength: Strong/Moderate

- Things that could affect graph?

- Brand
- Material
- Availability



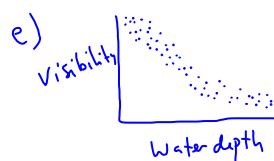
Direction: Positive

Form: Linear

Strength: Strong

- Things affecting graph:

- Get to the bottom



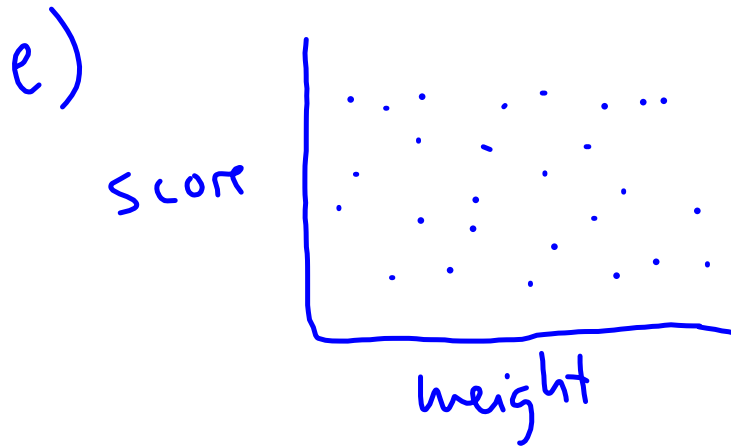
Direction: Negative

Form: Curved

Strength: Strong/Moderate

- Things affecting graph:

- Salinity
- Location
- Time of day
- Temperature



Direction: None

Form: None

Strength: None